

Suggestions to Advance New Fuels and Create Jobs in California

IPER Hearing



*Advanced Transportation
Technologies*

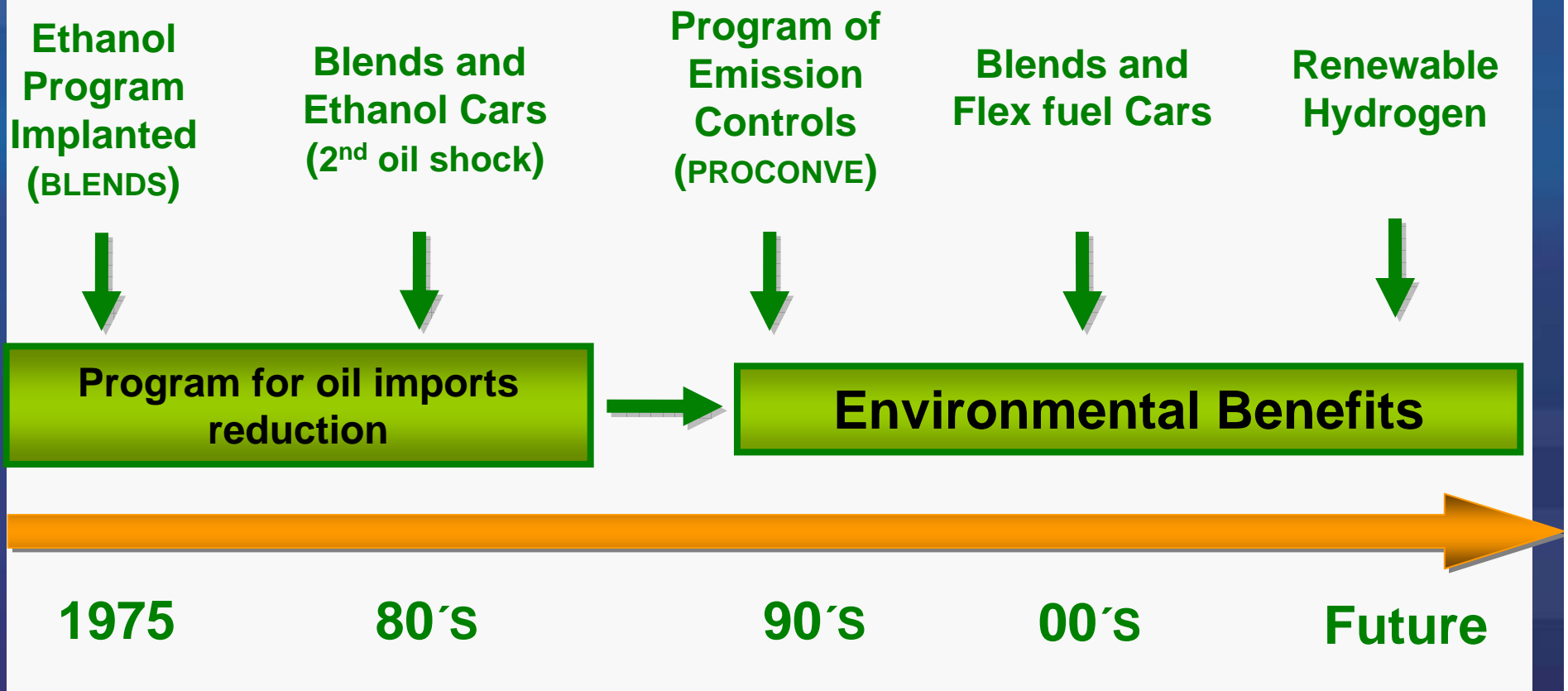
*Clean
Transportation
Solutions SM*

John Boesel
President and CEO

July 8, 2005

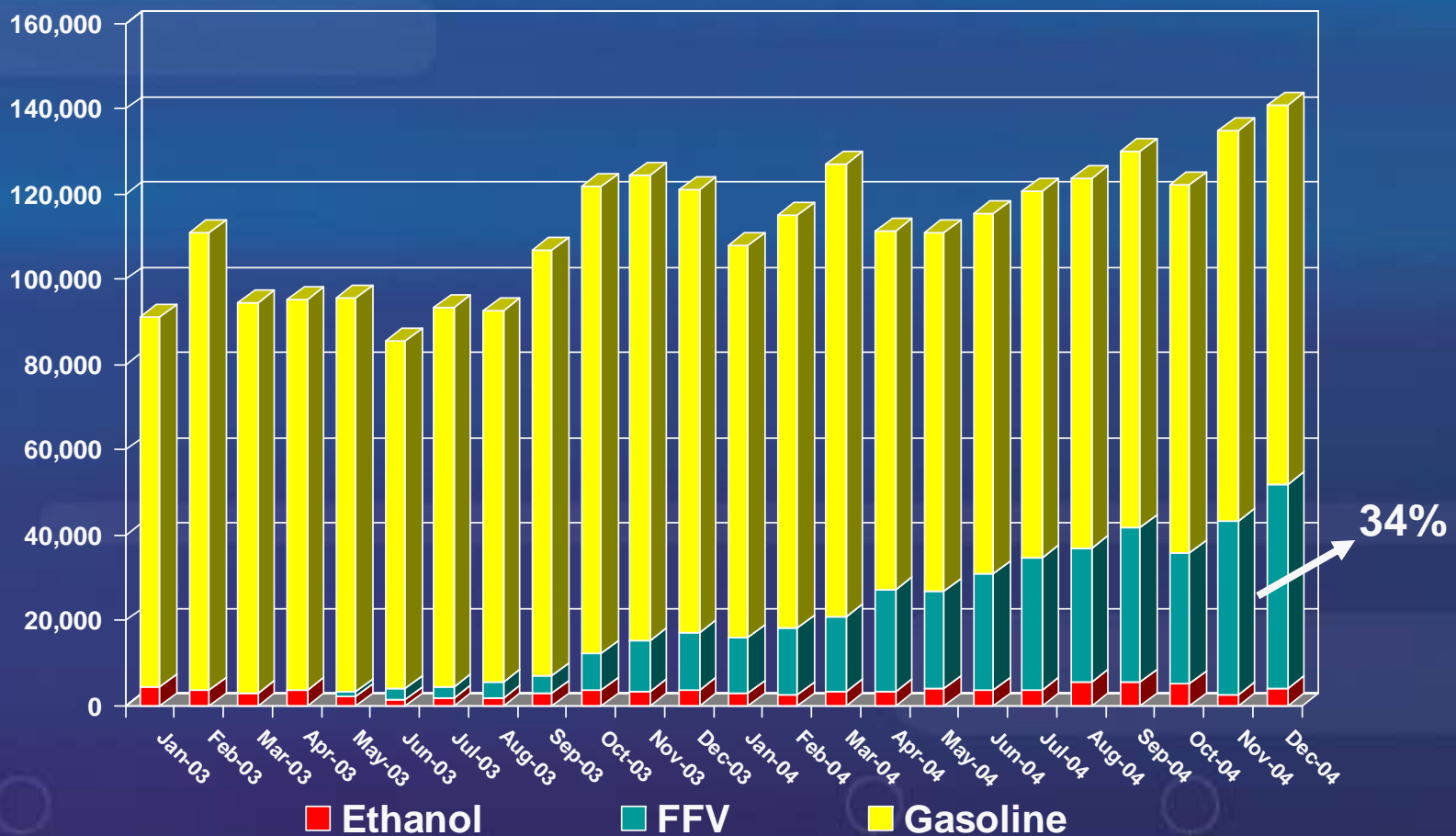


Fuel Ethanol Program Evolution





Flex-fuel Vehicle Sales Evolution in Brazil (Jan 03-Dec 04)





High-Blend Ethanol Use to Increase in 2005

- Approximately 200 E85 fueling stations in 20 states
 - > 100 E-85 Stations in MN
 - E85 typically \$0.35-0.40/gallon less than gasoline
- Over 4 million FFVs on U.S. roads
- 200,000 FFVs but only 1 public E85 refueling station in California
 - *Why?*



What CA Should Do to Support E-85 Usage

- **Develop a clear and understandable path for certifying an E-85 station**
 - To date, industry is confused by CARB requirements
 - Certification costs appear very high
- **Require all news cars sold to be Flex-Fuel Vehicles (FFVs)**
 - Minor additional cost could result in substantial benefits in terms of petroleum reduction



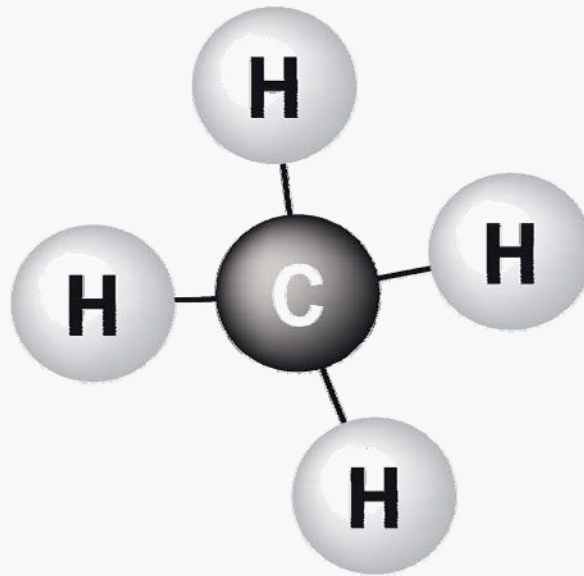
Natural Gas = Biogas But with Some Important Exceptions

Methane

Natural gas

Fossil
Fuel

Less GHG
Emissions



Both Good for
Air Quality!

Biogas

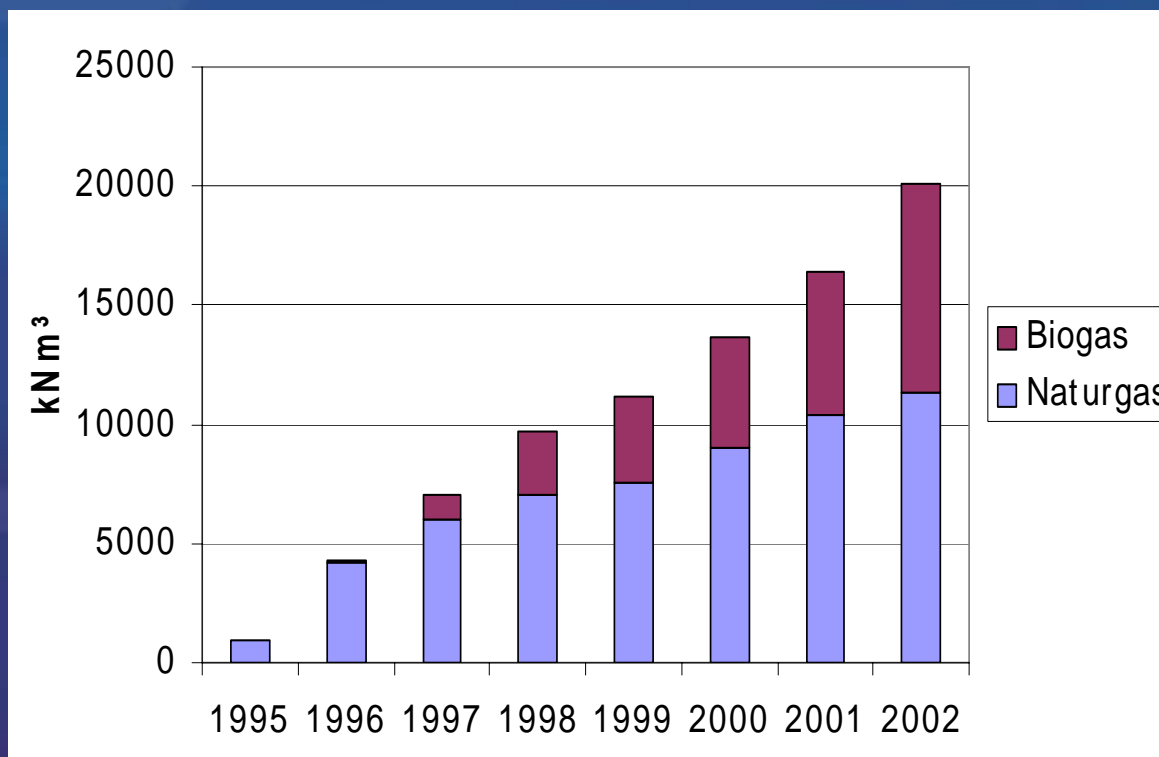
Renewable
Fuel

Net zero
or
negative
GHG
Emission



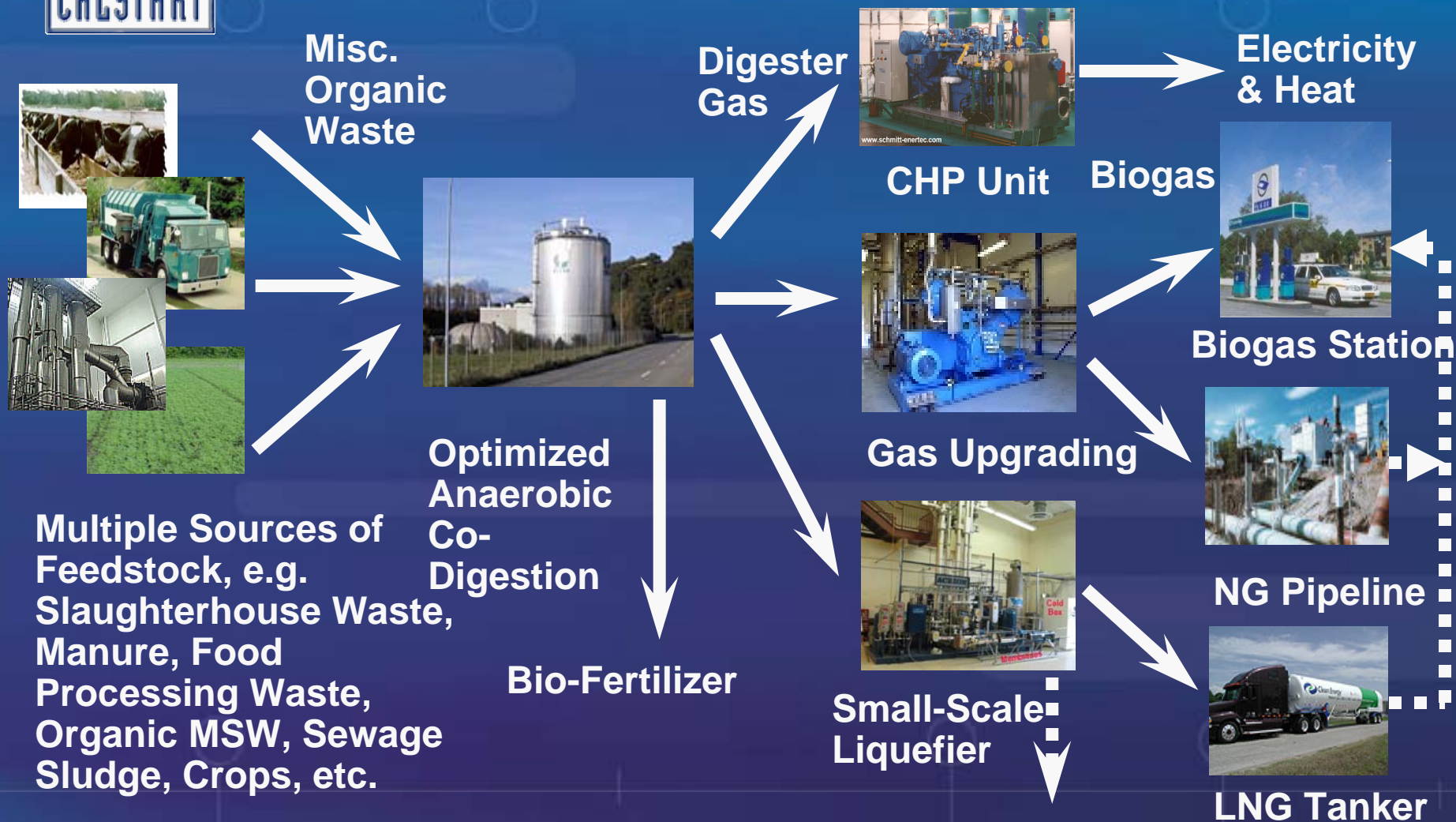
NGV Fuel Sales of Biogas vs. Natural Gas in Sweden

45% of NGV fuel sold in Sweden today is biogas and the percentage is increasing!





Tomorrow's Digester & Gas Upgrading Process Flow





State Actions Needed to Develop Biogas as a Transportation Fuel

- Adopt clear and enforceable means for renewable methane to be inserted in CA gas pipelines
 - State could adopt Swedish standards for biogas
 - Address any additional barriers preventing use of biogas in pipeline system
- Require that all methane from sewage treatment plants be tapped and converted to a transportation fuel or electricity



A Simple Sign

- Ubiquitous highway signage indicating car pools can use HOV lanes
- Clean fuel vehicles with appropriate stickers can too
 - Why don't Caltrans signs indicate that?



Incentive Funding Needed

- To support clean air goals, state created Moyer program
 - Extremely cost-effective means to reduce air pollution
 - High % of program dollars to replace old diesel engines with new ones
- Gasoline and diesel benefit from numerous subsidies and have incumbent advantage
- Time for a Moyer (Boyd/Geesman?)
Program for Transportation Energy Security

Clean Transportation Solutions SM
Advanced Transportation Technologies SM



www.weststart.org
www.calstart.org